

5230 Evaluation

December 13, 1976

Functional Assistance to the Escante Ranger District,
Dixie National Forest

Deputy Regional Forester, S&PF

On November 18, 1976, at the request of Crocket Dumas, Escalante Ranger District, Entomologists Ken Gibson and Lawrence Stipe were accompanied by several Dixie National Forest personnel on an evaluation of the Griffin Point sale area. Those in attendance during our inspection from the Escalante Ranger District were Ranger Chuck Birkemeyer, Forester Crocket Dumas, and Technicians Grant Spencer and Duane Stewart. Also present were Alan Wright, TM Staff, S.O., and Technicians Brent Ford and Robert Fillmore, Teasdale Ranger District. Based on the observation of new attacks during the layout and administration of a salvage sale on Griffin Point, District personnel became concerned about a possible bark beetle build-up in and adjacent to the sale area. It was the purpose of our visit to determine the extent, level, and future hazard of the spruce beetle population in the sale area.

The area on Griffin Point, T34S., R1W., sections 10 and 11, examined during our visit consisted of two adjacent timber sale areas. These sales were in spruce-fir stands at an elevation of approximately 10,000 feet. The area was first cut in 1972 when all trees were cut to a 12 and 14 inch diameter limit. Slash was piled and burned. Adjacent to, but not part of the original sale, more than 1000 spruce beetle infested trees were cut and removed during late 1975 and through 1976. Of the trees marked for removal, a small area was overlooked by the operator and several infested trees were still standing when we visited the area. This salvage sale consisted of both spruce beetle infested windthrow and standing infested trees. Being alert to the accumulation of winter blowdown, quick action on the part of the District to remove this infested material avoided a serious spruce beetle problem in the area. However, following the salvage sale, a small spruce beetle population remained. This residual population is partly the result of beetle infested stumps and also the failure of the logger to remove all of the green infested trees.

During this past summer (1976) District personnel observed trees damaged during the skidding operation being attacked by spruce beetle. The majority of these attacks were located at the base of the tree around the wound area. Concerned by this activity, the District posed the following questions:

1. Did the original sale contribute to the present situation?
2. What can be done to minimize the impact of the current spruce beetle population?

Considering the diameter limits in the original cutting units and the absence of spruce beetle emergence holes in the remaining logging slash, the diameter limit cutting blocks of 1972 did not in any way contribute to the present situation. The present spruce beetle population in the adjoining stands is the result of a large amount of winter blowdown. Shaded blowdown within a stand has a potential to produce an eight-fold increase in population while in standing green trees brood production is closer to 1:1. It is this large buildup potential in shaded windthrow that makes the removal of storm damaged trees of utmost importance. In this case, the District acted quickly and avoided a major problem.

The other question concerns the residual spruce beetle population. During the past summer (1976) this population attacked standing green trees and mechanically damaged trees. All of the green infested trees had well developed egg galleries with eggs and small larvae while most of the attacks in the mechanically damaged trees were unsuccessful. To minimize the future impact and concentrate this population, it is recommended that approximately two trap trees per acre be felled in areas where green infested trees are located. Trap trees should be larger than 16 inches dbh and their limbs should not be removed. I&DC personnel will evaluate the attack density in the trap trees next spring (1977) at which time recommendations will be made concerning any further manipulation of the spruce beetle population.

Additional ideas to consider during spruce logging which will help minimize or avoid possible spruce beetle problems are the following:

1. Since stumps are good reproduction sites and can provide an overwintering site for large numbers of adult beetles, stumps should be cut as low as possible.
2. During the logging operation some effort should be made to minimize the amount and degree of mechanical damage caused during road and skid trail construction and while skidding.
3. Avoid large accumulations of shaded logging slash. Be particularly careful with large diameter logs.
4. Following a clear-cut sale, two to three years are needed before windthrow along the edge will stop and for the residual stand to stabilize. During this period sale areas should be checked and large amounts of blowdown should be treated or preferably removed.

5. Due to the extreme hazard associated with winter blowdown, always be alert for such areas. Remove this type of material whenever possible as part of a current sale or a special salvage operation.
6. For proper timing of trap tree felling and removal, log removal, and other spruce beetle related activities, appended is a life cycle chart depicting beetle activity by seasons. In most areas of R-4, the spruce beetle has a two-year life cycle, but since there are two overlapping cycles, there is an adult flight each year.

Lawrence E. Stipe

LAWRENCE E. STIPE
Entomologist
Insect & Disease Control
State & Private Forestry

Approved

A. M. RIVAS

A.M. Rivas, Director
Insect & Disease Control
State & Private Forestry

cc:

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Don Curtis

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